

(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Xing Su et al.

Application No.: 10/670,701

Confirmation No.: 8780

Filed: September 24, 2003

Art Unit: 1637

For: PROGRAMMABLE MOLECULAR  
BARCODES

Examiner: M. E. Baughman

**DECLARATION OF XING SU UNDER 37 CFR 1.131**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

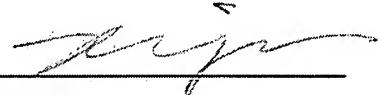
I, Xing Su, hereby attest to the following facts:

1. I am a co-inventor of U.S. Patent Application No. 10/670,701 ("the '701 application").
2. I have reviewed the claims pending in the '701 application, as amended via the Amendment filed herewith.
3. The barcodes shown in Exhibits A and B were prepared by me or under my supervision. The Raman spectroscopy of some of the barcodes shown in Exhibits A and B, resulting in the Raman spectra shown in Exhibit C, was performed under my supervision. All work and associated writings were carried out in the United States.
4. All dates on attached Exhibits A, B and C have been masked unless otherwise stated herein by reference to specific dates.
5. Prior to August 29, 2003, which is the effective filing date of Woudenberg (US 7,198,900, filed 8/29/03), cited in the Office Action of October 10, 2008, I reduced my invention to practice as described and claimed in at least independent claims 1 and 12 of the above-identified application, as evidenced by the following:
  - (a) I prepared a plurality of barcodes shown in Exhibits A and B, at least one of the plurality of the barcodes comprising two or more different types of tags (see barcode

RF1 in Exhibit B) branched to an organic molecule backbone (see barcodes shown in Exhibit B), wherein the number of barcodes in the plurality of barcodes exceed the number of different types of tags branched to the plurality of barcodes (see Exhibits A and B showing that a total of 10 barcodes were prepared using four different types of tags, namely, ROX (carboxy-X rhodamine), FAM (6-carboxyfluorescine), TAMRA (tetramethylrhodamine), and Texas-red dye); and

(b) I detected some of the barcodes shown in Exhibits A and B using Raman spectroscopy (see Exhibit C).

I hereby acknowledge that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. § 1001) and may jeopardize the validity of the present application or any patent issuing thereon. All statements made of my own knowledge are true and all statements made on information and belief are believed to be true.

By: 

Xing Su

Date: 3/18/09

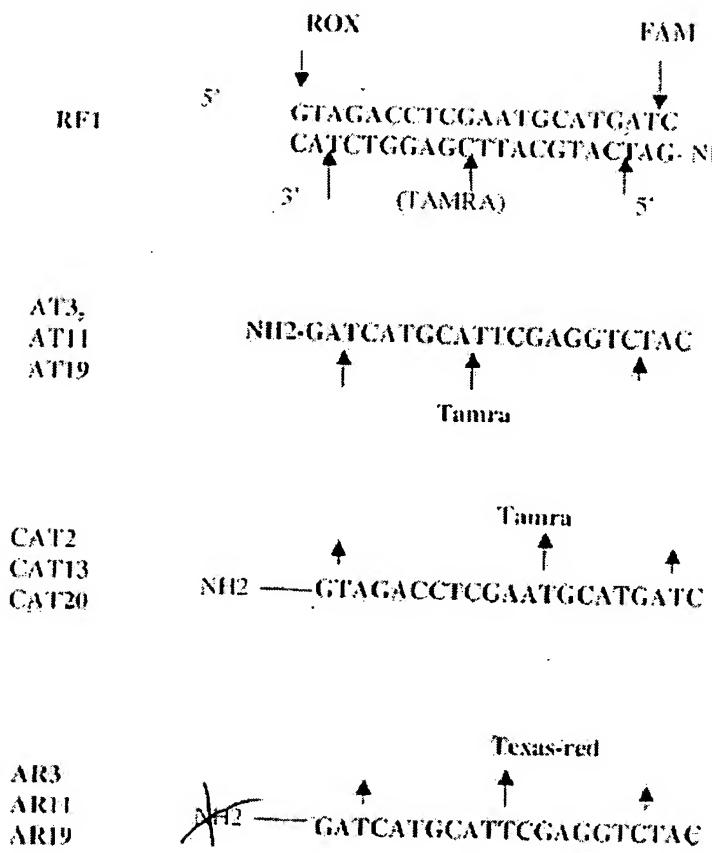
Attachment: **Exhibits A, B and C**

**Exhibit A**

Seq #	Seq Name	Seq 5' to 3'
5380	M1	[BiotEG]TTATCATGCCAAGAAATGGG TATTAAGAACCAAGTACCCGAC1CATC GAGAACAAAGCAGCCGTTTTTATTTC TCATCGTAGGAAATCATTACCCGCGCG CAAT
5381	M2	[Phosp]AGCAAGCAAAATCAGATATAG AAGGCTTATCCGGTATTCTAAGAAC CGGAGG[Bio-ON]GTTTACGCGAAC C1CCCCGACTTGCAGGGAGGGTTTGA AGCCTTAAAT
5382	M3	[Phosp]CAAAGATTAGTTGCTATTTC CACCCAGCTABAATTTCATCCGAA TCTTACCA[Bio-ON]CGCTAACGACC GTCCTTCCAGAGCCTAATTGCGCAG TTACAAAA
5383	M4	[Phosp]TAAACAGCCATATTATTTATC CCAATCCAATAGAACAAAGATTTT TGTTTAACG[Bio-ON]CAAAATGAA AATAGCAGCCTTACAGAGAGAAATA ACATAAA
5384	M5	<i>Phosph</i> <i>Am-C6</i> AACAGGGAAAGGGGATTAGA CGGGAGAAATTAACTGAAACACCGTTC AACAAAGTCAGAGGCTATTGAGC CCTAATATCAGAGAGATAACCCACA AGAAAT[Bio-ON]
5385	CAT7	[Am-C6]CTAMdT]AGACCTCGAATGC ATGATC
5386	CAT13	[Am-C6]TAGACCTCGAA[TAMdT]GC ATGATC
5387	CAT20	[Am-C6]TAGACCTCGAA[TGATG] TAMdT
5388	AR3	GA[Am-Uni-TxRed]CATGCATTGCA GGTCTAC
5389	AR11	GATCATGCAT[Am-Uni-TxRed]CGA GGTCTAC
5390	AR19	GATCATGCATTGAGGTC[Am-Uni- TxRed]AC

Designator	Quantity	Description
Am-Uni	3	Uni-Link AminoModifier
AmC6	3	Amino Modifier C6 (STANDARD)
Bio-ON	4	Biotin-ON
BioTEG	1	Biotin-TEG (STANDARD)
Phosp	4	Phosphate
TAMdT	3	TAMRA-dT
TxRcd	3	Texas Red-X (ester)

**Exhibit B**



**Exhibit C**

